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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,837	01/07/2002	Andrew C. Gilbert	CF-51	2702

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EXAMINER	
HARBECK, TIMOTHY M	

ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/040,837	GILBERT ET AL.	
	Examiner	Art Unit	
	Timothy M. Harbeck	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/07/2002*. 04/01/2003
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are directed toward a system however there is no recitation of any structure. These claims are therefore indefinite as on or ordinary skill in the art cannot determine what the system is comprised of.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 13-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims are directed toward system claims but do not recite any structural limitations. It appears these claims are directed toward software.

Software, programming, instructions or code not claimed as encoded on computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in a computer. When such descriptive material is recorded on some computer-readable medium it

becomes structurally and functionally interrelated to the medium and will be statutory in most cases.

Furthermore, software, programming, instructions or code not claimed as being computer executable are not statutory because they are not capable of causing functional change in a computer. In contrast, when a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer and the program, and the computer is capable of executing the program, allowing the program's functionality to be realized, the program will be statutory.

Claims 13-24 are therefore rejected where there is no indication that the proposed software is recorded on computer-readable medium and/or capable of execution by a computer. Examiner suggests that the applicant incorporate into Claims 13-24 language that the proposed software is recorded on computer-readable medium and capable of execution by a computer to overcome this rejection.

Correction required. See MPEP § 2106 [R-2].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupien et al (hereinafter Lupien US 5,689,652) in view of Keith (US 2004/0236614 A1).

Re Claim 1: Lupien discloses a method for providing a crossing market for trading a tradeable instrument, the method comprising

- Providing crossing market rules that govern the trading in the crossing market (Abstract, Column 3, lines 44-53; crossing based on profiles govern the market)
- Receiving a plurality of customer orders (Column 3 line 54-Column4 line 5)
- Selecting a bid-offer liquidity spread from the plurality of bid-offer liquidity spreads (Column 4, lines 10-26)

Lupien does not explicitly disclose the steps comprising:

- Determining an order imbalance based on the received plurality of customer orders
- Calculating a crossing price based on the order imbalance and the selected bid-offer liquidity spread

Keith disclsoes

- Determining an order imbalance based on the received plurality of customer orders (paragraph 0065)
- Calculating a crossing price based on the order imbalance and the selected bid-offer liquidity spread (paragraph 0065)

It would have been obvious to a person of ordinary skill in the art at the time of invention to include the teachings of Keith to the disclosure of Lupien in order to account for any disparities between the buy and sell side orders. In weighting the crossing price, the system can maximize participation in the market, which increases both the liquidity and depth of the market.

Re Claim 2: Lupien in view of Keith discloses the claimed method supra, but does not explicitly disclose providing a method for trading a fixed income security. However, Lupien does broadly disclose the trading of "variety of stocks," (Column 1, lines 37-60). Official Notice is taken that the trading of fixed income securities on a crossing market is notoriously old and well known in the art. It would have been obvious to a person of ordinary skill at the time of invention to include the trading of these instruments to the disclosure of Lupien in view of Keith to create a market for this popular type of security.

Re Claim 3: Lupien in view of Keith discloses the claimed method supra and Lupien further discloses the step comprising wherein providing crossing market rules further comprises requiring participation in a series of crossing markets (Column 4, lines 1-26; "The CMC will then calculate for every buy/sell profile pair, a mutual satisfaction cross product. The mutual satisfaction cross product represents the degree to which that buy/sell pair can satisfy each other.

Re Claim 4: Lupien in view of Keith discloses the claimed method supra and further discloses wherein providing the crossing market rules further comprises requiring adherence to the crossing market rules. This step is

inherent in the issuance of rules. If adherence is not required then these are not in fact rules.

Re Claim 5: Lupien in vie of Keith discloses the claimed method supra and Keith further discloses wherein the selecting a bid-offer liquidity spread comprising selecting a bid offer liquidity spread based on the order imbalance (paragraphs 0064-0065; "The imbalance is used to determine a point on the curve, and thus to specify the price change.")

Re Claim 6: Lupien in view of Keith discloses the claimed method supra and Keith further discloses wherein the selecting a bid-offer liquidity spread comprising selecting a bid offer liquidity spread based on the proximity of a midpoint of the selected bid-offer liquidity spread to the price of the order imbalance (paragraphs 0064-0065; "The price change being measured relative to a specified price, such as the midpoint of the buy-sell quote spread from an external market.")

Re Claim 7: Lupien in view of Keith discloses the claimed method supra and Keith further discloses wherein the calculating a crossing price comprising calculating a volume-based weighted average between a midpoint of the selected bid-offer liquidity spread and a last-executed trade (paragraph 0065; "the auction match will occur at the midpoint of the most recent quote spread less 2 points.")

Re Claim 8: Lupien in view of Keith discloses the claimed method supra and Keith further discloses wherein the calculating a crossing price comprising calculating a volume-based weighted average between a midpoint of the

selected bid-offer liquidity spread and the order imbalance (paragraph 0065-0066).

Re Claims 13-20: Further system claims would have been obvious in order to implement the previously rejected method claims 1-8, respectively, and are therefore rejected using the same art and rationale.

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupien in view of Keith as applied to claim 1 above, and further in view of Gary (US 6,618,707 B1).

Re Claims 9-10: Lupien in view of Keith discloses the claimed method supra but does not explicitly disclose the step further comprising incentivizing market makers to provide liquidity by providing a market maker that controls a majority or a predetermined substantial minority of the trading with additional information as to the size of the crossing and the amount of imbalance of buyers and sellers. Gary discloses where a primary market maker receives incentives as a bonus for maintaining an orderly market (Column 4 line 65-Column 5 line 3). It would have been obvious to a person of ordinary skill in the art at the time of invention to include the teaching of Gary to the disclosure of Lupien in view of Keith in order to maintain a certain degree of liquidity and order in the particular market. In doing so, users of the market can be assured that they are receiving a fair trading price. While Gray does not explicitly disclose the incentives as information relating to the size of the crossing and the amount of imbalance, Official Notice is taken that this type of information is old and well known as

valuable to market makers as it allows for more transparency of the market, which allows said market maker to put themselves in a better position relative to their competitors. It would have been obvious to a person of ordinary skill in the art to include this information as the incentive so that the market maker can profit put themselves in a position to facilitate the most amount of trading, which leads to a greater profit.

Re Claims 11-12: Lupien in view of Keith discloses the claimed method supra but does not explicitly disclose the step further comprising incentivizing market makers to provide liquidity by rewarding a market maker that controls a majority or a predetermined substantial minority of the trading with the names of participating market makers and a reduced securities buy price and an increased securities sale price. Gary discloses where a primary market maker receives incentives as a bonus for maintaining an orderly market (Column 4 line 65-Column 5 line 3). It would have been obvious to a person of ordinary skill in the art at the time of invention to include the teaching of Gary to the disclosure of Lupien in view of Keith in order to maintain a certain degree of liquidity and order in the particular market. In doing so, users of the market can be assured that they are receiving a fair trading price. While Gray does not explicitly disclose the incentives as information relating to the size of the crossing and the amount of imbalance, Official Notice is taken that this type of information is old and well known as valuable to market makers as it allows for more transparency of the market, which allows said market maker to put themselves in a better position relative to their competitors. It would have been obvious to a person of ordinary

skill in the art to include this information as the incentive so that the market maker can profit put themselves in a position to facilitate the most amount of trading, which leads to a greater profit.

Re Claims 21-24: Further system claims would have been obvious in order to implement the previously rejected method claims 9-12, respectively, and are therefore rejected using the same art and rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Harbeck whose telephone number is 571-272-8123. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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